

AMENDMENTS TO THE CLAIMS

In accordance with Rule 1.121, a complete claim listing is presented below, including appropriate status identifiers. Changes in the amended claims are shown by strikethrough for deleted material, and by underlining for added material.

1-15. (Cancelled)

16. (Currently Amended) A ceramic coated fiber, comprising:

- (a) a fiber, and
- (b) ceramic, coated on the fiber,

wherein the ceramic has a BET surface area of at least 60 200 m²/g, and

~~the ceramic comprises crystalline ceramic and further comprises silver and/or palladium, and~~

when the ceramic comprises titanium, the fiber does not consist of TiO₂.

17. (Original) The ceramic coated fiber of claim 16, wherein the ceramic comprises TiO₂ and/or TiON having an anatase structure.

18. (Original) The ceramic coated fiber of claim 16, wherein the ceramic comprises at least one member selected from the group consisting of TiO₂, TiON, TiOS, Al₂O₃, ZrO₂, and MgO.

19. (Currently Amended) The ceramic coated fiber of claim 16, wherein the ceramic has a BET surface area of 60 200 m²/g to 300 m²/g.

20-27. (Cancelled)

28. (Currently Amended) A ceramic coated fiber, comprising:

- (a) a fiber, and
- (b) ceramic, coated on the fiber,

wherein the ceramic has a BET surface area of at least 50 200 m²/g, and

the ceramic comprises at least one member selected from the group consisting of Al₂O₃, ZrO₂, and MgO.

29. (Currently Amended) The ceramic coated fiber of claim 28, wherein the ceramic has a BET surface area of ~~60~~ 200 m²/g to 300 m²/g.

30. (Previously presented) The ceramic coated fiber of claim 28, wherein the ceramic accounts for 10 to 90% by weight of the ceramic coated fiber.

31. (Previously presented) The ceramic coated fiber of claim 28, wherein the ceramic further comprises silver and/or palladium.

32. (Cancelled)

33. (Currently Amended) The ceramic coated fiber of claim 28, wherein the ceramic has a BET surface area of ~~60~~ 200 m²/g to 2000 m²/g.

34. (Currently Amended) The ceramic coated fiber of claim 28, wherein the ceramic has a BET surface area of ~~100~~ 200 m²/g to 500 m²/g.

35. (Cancelled)

36. (Currently Amended) The ceramic coated fiber of claim 16, wherein the ceramic has a BET surface area of ~~60~~ 200 m²/g to 2000 m²/g.

37. (Currently Amended) The ceramic coated fiber of claim 16, wherein the ceramic has a BET surface area of ~~100~~ 200 m²/g to 500 m²/g.

38. (Cancelled)

39. (Previously presented) The ceramic coated fiber of claim 16, wherein the ceramic accounts for 10 to 90% by weight of the ceramic coated fiber.

40. (Withdrawn) A method for producing radical species, comprising illuminating the fiber of claim 17.

41. (Withdrawn) A method for purifying and disinfecting air or water, comprising contacting the air or water with the fiber of claim 17, and illuminating the fiber.

42. (Withdrawn) A photochemical reactor comprising the fiber of claim 17.

43. (New) The ceramic coated fiber of claim 16, wherein the ceramic further comprises silver and/or palladium.
44. (New) The ceramic coated fiber of claim 16, wherein the ceramic has a BET surface area of at least 500 m²/g.
45. (New) The ceramic coated fiber of claim 28, wherein the ceramic has a BET surface area of at least 500 m²/g.